

REMARKS

The inventor here is a co-inventor of an important previous patent, to an energy-recycling homogenizer. The current patent application and the previous patent have similar ownership. The previous invention is the subject of US Patent 5,473,408, HIGH-EFFICIENCY, ENERGY-RECYCLING EXPOSURE SYSTEM, issued December 5, 1995, Hoffman & Jain.

Dr. Kanti Jain, a co-inventor of the above energy-recycling homogenizer, explains in the current patent application, at Page 4 line 7 to Page 7, line 6, the operational characteristics and the advantage of compactness of the energy-recycling homogenizer.

The Abstract, Page 65, lines 1-9 of the current patent application, characterizes such operation and such advantage of compactness, as follows:

“A compact light-beam homogenizer is realized by multiple reflections within internally-reflecting optical channels which are arranged in a folded configuration. The optical channels may be hollow with mirrored walls, or made of a solid transparent optical material. Light enters through an apertured mirror whose internally reflective surface sends back-reflected rays forward for recycling. Multiple entry ports may be provided for combining several beams or for reducing the intensity in the channels.”

The homogenizer required in a high-resolution industrial optical system typically demands a characteristic optical length related to wavelength and to the number of reflections required to uniformize the industrial radiation beam to present a self-luminous output at the output plane. Such required optical length typically demands a related physical length, an undesirable requirement in many applications, as discussed in the current patent application at Pages 1-5, Background of the Invention. The carefully-folded configuration of this invention makes possible the configuration of a long-optical-beam-length recycling homogenizer in a compact physical length, while maintaining other important parameters such as numerical aperture and self-luminous output.

Claim 1 uses the term “compact” in the preamble and the term “folded optical channel means” as a primary element of the claim. The other selected generic claims, Claim 4 and Claim 79, similarly use the term “compact” in their preambles. Claim 4 uses the term ‘labyrinth set’ which can encompass a broad range of complexity of compact optical channels. Claim 74 is similar.

Applicant, through counsel, petitions the Examiner to grant a formal finding that originally-presented Claim 1, originally-presented Claim 4, and newly-presented Claim 79 are each generic. The Examiner is further asked to find these three generic claims acceptable within the patent application if all restriction should be waived. As an alternative, the Examiner is asked to find

these three claims (1, 4 & 79) generic within the provisional election.

Counsel recognizes the trap of a claim which counsel considers generic, but which the Examiner might consider “not generic,” and thus subject to continuing restriction. Nevertheless, professional ethics require counsel to represent that these three claims (1, 4 & 79) are fully generic.

Counsel asks that the Examiner accept these three claims (1, 4 & 79) as fully generic, in which case counsel believes the entire restriction will become moot when dependent claims are rearranged.

How The Problem Arose

Counsel, during preparation of the patent application, included a number of nuances of choice in the original specification, considering this inclusion required by the “best embodiment” requirement. Nuances of choice are certainly not “separate and distinct inventions.” All these nuances of choice were then being considered as the “best embodiment” in appropriate circumstances. As required by the Rules of Practice, these nuances of choice, then expected to be claimed in dependent claims, had to be depicted in the figures.

Counsel, based on more than a half-century of experience in business, patent law and litigation, believes that discussion cannot resolve in any reasonable time the surfeit of nuances of choice in the 14-way invention split by

figures grouping. Counsel represents that such nuances of choice may be shuffled pretty much at will. As an example, the homogenizer may be hollow or may be solid. The homogenizer may accept one beam or a plurality of beams at appropriate entry means. There similarly may be delivery of one beam or a plurality of beams at the homogenizer exit means.

Counsel further represents that discussion should quickly resolve all issues, eliminating counsel's currently-perceived need for resolution by higher authority. Such discussion should greatly reduce issues, easily reducing the Restriction to one or two identified "Inventions" and dealing with strings of claims rather than with 14 figures groupings.

Assuming agreement of counsel and Examiner in indexing such "Inventions" to appropriate lines of claims headed by generic claims believed allowable, resolution by discussion should be speedy. Under any set of circumstances, rearranging the restriction according to grouping of claims should simplify any necessary further discussion or petition..

Restriction as Revenue / Cost Issue

Restriction is, after all, a revenue / cost issue. The USPTO appropriately intends to grant a single patent for a single invention, for which the USPTO charges a single set of fees. Such fees at the time the restriction rule was first

implemented (1920's) were \$40 per 17-year lifetime of each patent: Now such fees approach \$5,000-\$10,000 per 20-year lifetime of each patent. The revenue / cost burden has shifted to the Applicant. There is no available appeal; any petition must ask the reviewing authority both to overturn the Examiner in the Examiner's area of scientific expertise (separate and distinct inventions) and also decide that a single fee is sufficient, possibly contrary to USPTO revenue .

The Examiner must allocate burden of cost and effort, much of which effort falls directly on the Examiner, using the tools provided by MPEP and the Rules of Practice. Unfortunately, this can result in using the restriction axe where a scalpel would be more appropriate. The question to be decided by the Examiner is how to divide separate and distinct inventions from construction nuances of system / subsystem and module / submodule, or even hollow / solid. Do nuances of construction detail require a fourteen-way split here? Applicant, through counsel, represents that such a 14-way split is neither appropriate scientifically nor even suggested by statute and rules in the matter of this current patent application.

Counsel and the Applicant want to patent this invention properly -- for a reasonable fee not multiplied by restriction ($\$ \times 14 = \$\$\$\$\$$)

There is no advantage to the public of making the 14-way split. The extra

fees to the USPTO (even assuming divisional applications with maintenance fees paid for the full term) will likely be dissipated in extra printing and examination costs for what the USPTO will handle as separate patents. Even this is assuming that applicant selects the costly expedient of filing divisional applications directed to nuances of construction, rather than to abandon well-deserved patent coverage to dependent claims directed to the financial details. Such dependent claims would make enforcement and licensing more effective.

The usual solution to restriction, accepted if not preferred by those who charge a bill rather than by those paying the bill, is to file one or several divisional applications.

Even the statute (35 USC 121) implicitly admits that restriction can be overzealous. This statute estops the USPTO and enjoins the courts from rejecting a divisional application as unpatentable over the original patent, regardless of overlap. Absent such statutory provision, such overlap might be forbidden as double patenting. Even so, it is improper for counsel to seek multiple patents for what he considers a single invention.

Not only does the solution of multiple divisional applications needlessly and expensively duplicate efforts and costs of the USPTO, possibly exceeding the increased fees collected, but the multiple similar patents projected via division will be an imposition on the public. Virtually identical patents, even with claims

grouped according to restriction, are confusing at best to the public. Even grizzled professionals have difficulty explaining such patent proliferation.

Miscellaneous Revenue Protection for the USPTO

The current patent application contains a large number of claims (now 82) and a large number of independent claims (now 14). Assuming that the restriction will be totally lifted, applicant pays for 62 extra claims at (the last three at current charge \$25.00 per excess) and pays for 11 excess independent claims at (the last one at current charge \$100.00 each). Note: These claim fees, admittedly much lower two years ago when this current patent application was filed, totaled \$952.00, in addition to the then \$385.00 filing fee which included a set of 3 independent claims and a total of 20 claims.. The USPTO has no known vehicle for refund of fees paid for claims not examined.

The Solution – Simplification or Waiver of Restriction

Counsel asks for waiver of the restriction, or, failing to convince the Examiner to grant a waiver, explanation for and simplification of the 14-way restriction at least for purposes of Petition. After such simplification, Counsel might possibly overcome ethical doubts by accepting the Examiner's simplified requirement as *res judicata*, and might file one or more divisional application to

reclaim most of the lost nuances of inventive subject matter. Alternatively, counsel might by cancellation of a non-generic parent claim, with transfer of the dependent claims to an allowed generic claim, eventually circumvent most of the revenue issues and move to the merits of the dependent claims.

For reasons of rule-following, counsel considers all claims not in the table of these three generic claims and their dependencies as possibly to be withdrawn. Counsel has made no attempt to retrieve anything so subject to being withdrawn, but further asks the Examiner to hold in abeyance any cancellation of withdrawn-non-elected claims. This will permit changing the dependency of such dependent claims. Counsel suggests we make such claims dependent on the appropriate generic claims once such generic claims are allowed.

Concluding Summary

Applicant traverses the restriction, with provisional election of the figure grouping <Fig. 1, 2, 3, 4, 5, 6, 6A, 7 & 27>. Note that Figs. 5, 6, 6A and 7 are added by counsel, subject to Examiner's approval. Applicant requests the Examiner to lift the restriction. Regardless of restriction, counsel represents that Claim 1, Claim 4 and new Claim 79, plus their many dependent claims (See table) are properly encompassed within the elected figure grouping, even if the Examiner should determine that the restriction must stand.

In the alternative, if the Examiner should continue to consider that the Rules demand some restriction, counsel petitions the Examiner to simplify the restriction. Counsel, who ordinarily feels bound by ethics to suggest resolutions of problems facing the Examiner or any other judge, in this situation feels constrained by those same ethics to refrain from suggesting any resolution. Counsel considers any nuancial splitting of this single invention, which is after all a technique for physically shortening a known optical homogenizer while retaining the optical length , to be improper.

For purposes of discussion and compromise, counsel asks the Examiner to withdraw the 14-way restriction, or at least to simplify it to not more than two or three "inventions," to simplify the expected petition. In return, counsel will attempt to reduce the total claims count to not more than 60, with not more than 10 independent claims with not more than six strings of dependent claims.

Respectfully,

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